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Bacteria Analytical Results

From time to time over the past few years, drillers have taken well water samples to a private laboratory and the DHEC Lab. There have been instances where the DHEC lab reported total coliform present in the sample and a private lab reported no coliform. The test method that our lab uses is the most sensitive of the four EPA-approved methods. Note that the EPA oversees the DHEC Lab and it has never failed an audit. In one case, however, a department staff member had taken two samples from the same tap at the same time and one of the samples was positive for total coliform and the other was negative. This would seem to indicate that this shows a problem in our lab procedures, but these results can be explained.

In water samples with chemicals present, those chemicals are evenly distributed throughout the water sample (i.e., the chemical is in every drop of water in the sample bottle). Bacteria, however, are living organisms that cling together and are thus found in "clumps." Therefore, at low concentrations of bacteria, it is very possible for one sample bottle from the same tap to capture a few "clumps" of bacteria and the other sample bottle to not capture a single clump of bacteria. Our lab stated that they have even seen duplicate samples taken from a single bottle in our lab show positive in one sample and negative in the other at these very low concentrations.

Please note that our lab reports bacteria results only as present or absent, so no count is provided (this also applies to public well regulatory compliance). If total coliforms are found to be present, that same sample is further analyzed to determine if fecal coliforms are present.

We sometimes encounter a private well that has water positive for total coliforms and negative for fecal coliforms. If the well has been inspected, found to be properly constructed, and total coliforms are still present after treatment, our inspectors will help the homeowner understand that this water quality is not a result of faulty well construction.





Save a Buck or Two

With apologies to a long distance telephone company for borrowing the slogan, there are some simple things you can do to save a little money. First, the Notices of Intent (NOIs) and the Water Well Record Forms (1903s) that are mailed to the Private Well Program come to the same room in the office on Bull Street. Therefore, those forms don't need to be mailed in separate envelopes. Also, to save postage, six of those forms can be mailed in a standard envelope for the first class rate.

To save some time completing the forms, many companies have had labels or rubber stamps made containing the name, certification number, company, address, etc., to attach that information to the appropriate part of the form.

The Blue Book

In 1983, the Department of Geology from the University of South Carolina published "Surface and Subsurface Stratigraphy, Structure and Aquifers of the South Carolina Coastal Plain." Because it is blue, it is simply called the "Blue Book." In addition to USC, staff from SC DHEC, the SC Geologic Survey and the former Water Resources Commission contributed to the work. It contains numerous maps defining and describing the Coastal Plain aquifers. It also contains five northwest-southeast cross-sections from the Fall Line to the coast that are spaced regularly between the Georgia and North Carolina borders. From these cross-sections, the depth to the various aquifers can be estimated anywhere in the Coastal Plain.

The Blue Book is large, measuring one-and-a-half by two feet, so that the figures can be read more easily. Copies are available for \$25.00; contact the Private Well Program if interested.

Can't Afford a Well?

For very low income families who own homes in need of repair, the Rural Development Agency in the US Department of Agriculture offers low-interest loans and grants. Home Improvement and Repair Loans and Grants are used to make the home more safe and sanitary or to remove health and safety hazards and therefore, can be applied towards installing a new, properly constructed well.

Loans up to \$20,000 are available and may be paid back over 20 years at one percent interest. To obtain a loan, homeowner-occupants must be unable to obtain affordable credit elsewhere and have incomes below 50 % of the area median income. Grants up to \$7500 are available to homeowners who are 62 years of age or older and who cannot repay a loan.

Contact Bert Koons of the South Carolina Rural Development staff of USDA in Columbia at (803) 253-3655 to find the USDA Field Office nearest to you.



Small Water System Permit Changes

As well drillers, you may have been asked to drill a well for a Small Water System. A public water system is a water system that serves more than one house. A state water system is a public water system that serves less than 15 taps, or less than 25 people per day. The purpose of the Small Water System Permit is to help small businesses have an approved public water supply without the cost of hiring an engineering firm to design the system. The permit is used to create a public water system that serves less than 25 people per day. It is intended for use by mechanic shops, small day care facilities, rental properties and campgrounds, to name a few.

A Small Water System permit is about 13 pages long and has a list of special conditions that explain how the well is to be installed. The conditions include the casing and grout length, screen settings, and even the size of the required storage tank, depending on the well yield.

Recently, the Small Water System application was changed to bring it back to its original purpose. The application was changed so that only small businesses, not permanent residences, are allowed to use this permit. Also, any business that will need a food service permit will not be able to use this permit. A \$250 fee has been added, and the name of the application was changed to "Application for a Permit to Construct a State Water System."

Some of the types of systems that cannot use the new application are restaurants, convenience stores, and permanent subdivisions. If a landowner wants to build one of these types of systems, they will have to hire a Professional Engineer (PE), and apply for a regular permit to build. Also, if public water is available within a half mile, then the owner will have to hire a PE and apply for a regular permit to build.

To get a copy of the new application, go to SCDHEC's Drinking Water Permitting and Compliance page at www.scdhec.net/water/html/dwpermit.html, and look for the "Application for a Permit to Construct a State Water System-DHEC Form 1206." The application includes a list of EQC District Offices which will handle the State Water System applications and permits. Just mail or deliver the completed form and fee to the District, and they will issue the Permit to Construct in a timely manner.

If you have any questions about the new State Water System application and permit, please call Shawn Clarke at (803) 898-3544.



SC DHEC - Private Well Inspector Contacts

Local well inspectors perform compliance inspections and provide technical assistance. Contact numbers for the local inspectors are listed below.

Bobby Dillard (Anderson, Oconee, Greenville, Pickens)	
Joe Faris (Chester, Lancaster, York)	
Mike Radford (Fairfield, Lexington, Newberry, Richland)	
Scott Hammet (Beaufort, Colleton, Hampton, Jasper)	(843) 846-1030 / fax (843) 846-0604
Valarie Rhodes (Aiken, Allendale, Bamberg, Barnwell,	
Calhoun, Orangeburg)	(803) 641-7670 / fax (803) 641-7675
Laura Snowden (Chesterfield, Darlington, Dillon,	
Florence, Marion, Marlboro)	(843) 661-4825 / fax (843) 661-4858
Charlie Lott (Berkeley, Charleston, Dorchester)	
Debbie Lathan (Abbeville, Edgefield, Greenwood,	
Laurens, McCormick, Saluda)	(864) 223-0333 / fax (864) 223-6935
Mike Settle (Georgetown, Horry, Williamsburg)	
Greer McLaurin (Camden, Kershaw, Clarendon, Lee, Sumter)	

Central Office Contacts

Jim Hess, Manager, Private Well Section: (803) 898-3376 Greg Withycombe, Technical Assistant: (803) 898-3232

Toll Free Number: 1-888-761-5989 Toll Free Fax: 1-888-761-6681

> SC DHEC - Bureau of Water 2600 Bull Street Columbia, SC 29201 Return Service Requested

